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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,601	09/12/2003	**R. Donald Grafton**	A8130.0153/P153	7642

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EXAMINER	
RYCKMAN, MELISSA K	
ART UNIT	**PAPER NUMBER**
3773	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/660,601	GRAFTON ET AL.	
	Examiner	Art Unit	
	MELISSA RYCKMAN	3773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/21/08 has been entered.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the anchor body receiving a second, knot-tying suture must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 7 includes "knot-tying knot tying" this should be corrected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 3, 7-9, 11, 12, 15, 16, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins, Jr. (US 5571139) in view of Grafton et al. (US 5964783).

Jenkins Jr. teaches a suture anchor (1) comprising:

- a bioabsorbable (Column 3, proximate line 42) anchor body (13) having a proximal end and a distal end; and a suture eyelet (27 or 28) formed of a strand of suture (it is noted that knot 27 comprises a suture eyelet), the suture eyelet can receive a second, knot-tying suture therethrough (Fig. 3C, eyelet that is part

of knot 27 is capable receiving the second suture 30) of the suture eyelet being disposed completely within the anchor body.

- wherein the suture anchor has a predetermined length and wherein the suture eyelet (28) is recessed from the proximal end of the anchor body by about one third of the predetermined length (fig. 3b)
- wherein the anchor body is provided with a drive socket (31) and the suture eyelet is disposed within the drive socket (fig. 3b)
- comprising a strand of a knot tying suture threaded through the suture eyelet (it is noted that the non-loop portion of the knot 27 or 28 is a strand of knot tying suture)
- wherein the anchor body is treaded from the proximal end to the distal end (fig. 1)
- wherein the anchor body has a constant outer diameter and a tapered inner diameter (fig. 2)
- the suture loop is a suture eyelet (28, when the loop is formed, there is an eyelet for the suture to pass through)

Jenkins Jr. fails to teach wherein the suture eyelet is insert-molded into the anchor body. Grafton teaches a suture anchor wherein a suture material is insert molded into the anchor body in order to increase pull out strength of the suture from the anchor body. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Jenkins Jr. with an insert-molded suture loop in order to increase pull out strength of the suture from the anchor body.

Jenkens fails to teach the second, knot-tying suture threaded through the suture eyelet, however it would have been obvious to one of ordinary skill in the art to connect the sutures as it would aid in placing the sutures into the anchor.

Claims 10, 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Jenkens Jr. and Grafton (5964783) and further in view of Grafton et al. (US 6319270).

The combination of Jenkens Jr. and Grafton (5964783) teaches all limitations of previous dependent claims 1, 9, 11, and 17 as previously described, but fails to teach wherein the anchor body has a constant outer diameter and a stepped tapered inner diameter and wherein the anchor thread extending between the proximal end and the distal end of the body has a crest which tapers from wide to narrow from the proximal end to the distal end of the body.

Grafton (6319270) teaches a suture anchor wherein the anchor body has a constant outer diameter and a stepped tapered inner diameter and wherein the anchor thread extending between the proximal end and the distal end of the body has a crest which tapers from wide to narrow from the proximal end to the distal end of the body in order to provide an increased percentage of thread surface area for each turn of the anchor, thus providing increased pull-out strength, and a decreased tendency for back-out (Column 2, proximate lines 1-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Jenkens Jr. and Grafton (5964783) as taught by Grafton (6319270) in order to provide an

increased percentage of thread surface area for each turn of the anchor, thus providing increased pull-out strength, and a decreased tendency for back-out.

Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Jenkens Jr. and Grafton (5964783) as previously described, and further in view of Jackson (US 6454772).

The combination of Jenkens Jr. and Grafton (5964783) teaches all limitations of preceding dependent claims 1 and 11, but fails to teach wherein the drive socket has at least one slot for receiving a corresponding protrusion on a driver head. Jackson teaches a threaded surgical implant, comprising a drive socket having a pair of slot tool receivers in order to receive a corresponding protrusion on a driving tool for effective delivery of the device to the tissue.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Jenkens Jr. and Grafton (5964783) with slot tool receivers as taught by Jackson in order to receive a corresponding protrusion on a driving tool for effective delivery of the device to the tissue.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dreyfuss (6652563), and further in view of Grafton (5964783).

Dreyfuss teaches a suture anchor (6) comprising an anchor body (6) having a proximal end, a distal end, and a drive socket (132, Figs. 3 and 6) at the proximal end; a suture eyelet (122 and the most right portion of anchor in Fig. 5 for an eyelet), the

suture eyelet is capable of receiving a second, knot-tying suture therethrough the suture eyelet being completely within the anchor body (Fig. 5), wherein the drive socket has at least one slot (Fig. 3) for receiving a corresponding protrusion on a driver head for driving the suture anchor (Fig. 6), wherein the slot terminates distally in a suture hole (where 138 meets 122) provided within the anchor body (slot 132 terminates distal of 122 Fig. 5), the suture hole (where 138 meets 122) is transverse to a longitudinal axis of the anchor body (Fig. 5).

Dreyfuss does not teach a bioabsorbable anchor body or the suture eyelet is insert-molded into the anchor body. Grafton teaches a bioabsorbable (col. 3, ll. 36) suture anchor wherein a suture material is insert molded into the anchor body in order to increase pull out strength of the suture from the anchor body. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Dreyfuss with a bioabsorbable material, a bioabsorbable material is helpful because the suture anchor may not be needed permanently and removal of the anchor is unnecessary. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Dreyfuss with the anchor being bioabsorbable an insert-molded suture loop in order to increase pull out strength of the suture from the anchor body.

Response to Arguments

Applicant's arguments filed 4/21/08 have been fully considered but they are not persuasive. The applicant generally argues the following:

- Jenkins teaches two suture knots and not a “suture eyelet”
- Jenkins does not teach a second knot-tying suture
- Grafton '783 does not teach a suture eyelet

The examiner respectfully disagrees with the applicant, Jenkins teaches a suture eyelet as stated above, when the knot of 28 is formed, there is an eyelet for the suture to pass through, the examiner argues that a knot comprises several eyelets. The examiners position is the applicant does not distinctly claim a second suture and suture knot in the independent claims. Grafton ‘783 teaches a suture eyelet as shown in Fig. 5.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Ryckman whose telephone number is (571)-272-9969. The examiner can normally be reached on Monday thru Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Jackie Ho can be reached on (571)-272-4696. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MKR
/Melissa Ryckman/
Examiner, Art Unit 3773

/(Jackie) Tan-Uyen T. Ho/
Supervisory Patent Examiner, Art Unit 3773